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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/748,281 | 12/31/2003 | Hiroyuki Okuhira | ION-0221 | 6605 |
| 23353 | 7590 | 07/11/2006 | EXAMINER | |
| RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036 | | | | ZIMMER, MARC S |
| | | ART UNIT | | PAPER NUMBER |
| | | 1712 | | |

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/748,281 | OKUHIRA ET AL. | |
| | Examiner | Art Unit | |
| | Marc S. Zimmer | 1712 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 June 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,12 and 13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 12 and 13 is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

Applicant has amended the claims such that they now mandate the utilization of an epoxy resin as an essential ingredient of their composition thereby obviating the rejections over *Roesler* and *Gaa*. For the record, the Examiner had considered whether it would have been obvious to add an epoxy resin per the teachings of *Majolo* to the compositions taught by the aforementioned references. It would not have been obvious to do so in the Examiner's estimation at least for the reason that the urethane polymers are prepared using specified materials that render the resulting polymer water dispersible. There is no express indication that the epoxy resin taught by *Majolo* is water-dispersible nor are there any structural details furnished that would have led the Examiner to the conclusion that the epoxy resin was inherently dispersible in an aqueous medium. In the absence of such a teaching, the Examiner believes it would not have been obvious to modify the compositions of *Roesler* and *Gaa* in this manner because the epoxy resin would not mix properly with the other components of the system.

In a modified survey of the prior art, the Examiner discovered yet another disclosure of a silane-functionalized urethane polymer wherein it is contemplated that said polymer may be derived from isocyanate compounds featuring isocyanate groups bonded to secondary/tertiary carbon atoms. This reference is properly combinable with *Majolo* is the foundation of the rejection stated *infra*. The Examiner sincerely regrets that this reference was not found earlier.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh et al., U.S. patent # 6,015,475 in view of Majolo et al., DE 59 102 651. Hsieh describes a polyurethane based sealant composition comprising a urethane prepolymer and a mixture of catalysts one of which is a tin- or amine based silane condensation catalyst (column 7, line 17 through column 8, line 25). The prepolymer is prepared from one or more polyols (column 4), a diisocyanate among which are include numerous embodiments wherein the isocyanate moiety is bonded to a secondary/tertiary carbon (column 3, lines 2-4 and 13), and an amino- or mercapto-functional silane (column 5, lines 35-38 and column 6, lines 12-41).

Hsieh does not specifically mention that the catalyst (curing agent) is formulated as a second part. Nevertheless, this aspect of the invention is held as being obvious in view of (i) the acknowledgement that the catalyst exhibits high activity in the presence of moisture (column 7, lines 57-60) and (ii) the difficulties associated with excluding all sources of water. Indeed, the separation of catalyst from curable polymer is widely practiced as a means of preventing premature curing from taking place.

Relevant to the present discussion, it is mentioned in several places that the intended application of the composition is as a sealant for members of which at least one is glass (column 2, lines 13-18, column 5, lines 14-18 and lines 27-29).

Majolo, of course, remedies the shortcomings of the Hsieh by providing motivation to incorporate an epoxy resin into the composition of Hsieh. (Recall that Majolo documents a synergistic effect realized by adding an epoxy resin and UV stabilizer to a urethane polymer where it is bonded to glass.)

Allowable Subject Matter

Claims 12 and 13 are allowable. Neither Hsieh nor any of the other references of interest describe the employment of a polyamine. Although it is appreciated that polyamines may be used as curing agents for isocyanate-functionalized polymers, there is no particular motivation to add this compound given that there are already two curing mechanisms available to the sealant composition.

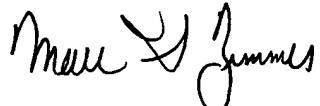
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 6, 2006



MARC S. ZIMMER
PRIMARY EXAMINER